City of Portland Clean Air Construction Standard

Idle Reduction Requirements

Beginning January 1, 2020 contractors working on City construction projects shall take the following steps to reduce unnecessary diesel equipment idling:

- All nonroad diesel equipment must shut down after five (5) minutes of inactivity, and
- All nonroad diesel equipment shall have decals/prompts visible to the operator to remind them to shut down the equipment after five (5) minutes of inactivity, and
- Contractors will post "Five Minute Limit" signs in high foot traffic areas of the job site, visible to workers, and
- Contractors will ensure all diesel equipment operators are aware of the policy.

Exemptions to the above idle reduction requirements are allowed in circumstances where:

- the safety of contractors and their employees may be compromised if diesel equipment is turned off; for example, where employees are working in a trench; or
- the equipment meets the most stringent EPA emissions standards or has been retrofit with a DPF; or
- frequent shutdowns may be detrimental to the exhaust control system, reducing the effectiveness of that system by lowering the exhaust temperature; or
- equipment requires testing, servicing, inspection, or repairs.

Diesel Engine Requirements and Phase-In Schedule

Effective January 1, 2021 and in accordance with the phase-in schedule outlined below all diesel-powered nonroad construction equipment greater than 25 horsepower and all on-road diesel dump trucks and cement mixers used on City construction projects must meet the following requirements:

Effective Date of Diesel Engine Requirement	Nonroad Diesel (over 25hp)	On-Road Diesel (cement mixers and dump trucks)
January 1, 2020	No Idling	
January 1, 2021	No tier 0 engines allowed[1]	
January 1, 2022	No tier 1 engines allowed[1]	
January 1, 2023	No tier 2 engines allowed[1]	
January 1, 2024	No tier 3 engines allowed[1,2]	No pre-2007 engines[1,2]
January 1, 2025	Tier 4 only[1,2]	
January 1, 2026	Tier 4 only[3]	No pre-2007 engines[3]

[1]Diesel engine retrofits (emission control devices) allowed on older equipment/vehicles following the Compliance Options Protocol provided herein.
[2]No new DOC emission control devices allowed. Equipment retrofitted with DOC emission control devices prior to 2024 are allowed.
[3]No older equipment/vehicles allowed unless it was retrofitted with a DPF prior to 2026. Exemption: certified DMWESB or certified SDVB firms may use equipment/vehicles retrofitted with a DPF or DOC prior to 2024 (for DOCs) and 2026 (for DPFs).

Contractors may apply for exemptions to the above diesel engine requirements on a per project basis in circumstances where:

- The equipment/vehicle is required for an emergency (including for underground equipment operators).
- After following the Compliance Options Protocol, the required emission control device would obscure operator lines of sight or otherwise impact worker safety or the equipment is not able to be retrofit with a verified emission control device; and no compliant rental equipment is available within 100 miles of the job site.
- After following the Compliance Options Protocol, the contractor can demonstrate that due to the uniqueness of the equipment/vehicle or similar special circumstances, it is not reasonable to comply with the diesel engine requirement for a specific piece of equipment/vehicle.

Compliance and Verification

Contractors (prime and sub-contractors, and applicable suppliers) will demonstrate compliance with the Clean Air Construction Standard on an annual basis by providing to the City, or approved program operator, all requested diesel equipment/vehicle information needed to verify compliance, including confirmation that retrofit devices are maintained on the equipment in proper operating condition. Upon determining compliance with the requirements, the City, or approved program operator, will issue an equipment/vehicle decal for each compliant piece of equipment/vehicle. This decal must be displayed on the compliant equipment/vehicle at all times in a location readily visible to City staff. In addition, random on-site inspections by City staff (or approved program operator) will be conducted on a project by project basis.

Compliance Options Protocol

Compliance with the Diesel Engine Requirements contained herein will be determined according to the following protocol:

Protocol Step	Question(s)	Answer	Action
1	Is the nonroad equipment over 25hp? Is the on-road vehicle a cement mixer or dump truck?	YES	Go to Step 2
		NO	Register equipment and obtain compliance verification. No further action required other than anti-idling compliance on job-site.
2	Is the equipment/vehicle required for an emergency? (including for underground equipment operators)	YES	Request Exemption
		NO	Go to Step 3
3	Is the equipment/vehicle powered by electricity or alternative (non-diesel) fuel?	YES	Register equipment and obtain compliance verification. No further action required other than anti-idling compliance on job-site.
	Is the diesel cement mixer or dump truck 2007 or newer? Does the diesel nonroad equipment utilize only a Tier 4 engine(s)?	NO	Go to Step 4

4	Can the equipment/vehicle be repowered or retrofit with a CARB or EPA verified DPF or equivalent?[1]	YES	Repower or retrofit equipment and obtain compliance verification.
		NO	If 2023 or earlier, go to Step 5 If 2024 or later, go to Step 6.
5 (pre-2024)	Can the equipment/vehicle be retrofit with a CARB or EPA verified emissions control device other than DPF (or equivalent)?[1]	YES	Retrofit equipment with an emission control device that maximizes diesel particulate matter emission reduction. Obtain compliance verification.
		NO	Go to Step 6
6	Is compliant rental equipment available within 100 miles of the job site?	YES	Rent equipment and obtain compliance verification.
		NO	Request Exemption.
[1]Equivalent is defined as achieving the same level (within 10%) of diesel particulate matter (PM) emissions reduction as a DPF.			

Terms/Definitions

CARB: California Air Resources Board, a state regulatory agency charged with regulating the air quality in California.

Diesel Particulate Matter – the solid or liquid particles found in the air released through the exhaust from diesel vehicles/equipment. Exposure to diesel particulate matter increases the risk of heart attack, stroke, cardiovascular disease, exacerbates asthma, and can lead to low-weight and pre-term births. Diesel particulate matter is also a known as a human carcinogen as determined by the International Agency for Research on Cancer.

DOC: Diesel oxidation catalyst. A device designed to reduce harmful diesel emissions such as carbon monoxide, hydrocarbons and certain diesel particulate emissions.

DPF: Diesel particulate filter. A device designed to trap all diesel particulate matter above a certain size.

Emission Control Device: technology added to equipment to reduce harmful emissions. These may include catalytic converters and particulate filters, among other technologies. For the purpose of this policy, all emission control technology must be verified by the EPA or CARB.

EPA: U.S. Environmental Protection Agency, a federal regulatory agency charged with regulating the environment.

EPA Nonroad Emission Ratings/Tiers

Nonroad Diesel Emission Ratings (EPA)								
ENGINE MODEL YEAR	HORSEPOWER RANGE							
	25-49	50-74	75-99	100-174	175-299	300-599	600-750	750+
1995	**T0**	**T0**	**T0**	**T0**	**T0**	**T0**	**T0**	**T0**
1996	**T0**	**T0**	**T0**	**T0**	**T1**	**T1**	**T1**	**T0**

1997	T0	T0	T0	T1	T1	T1	T1	T0
1998	T0	T1	T1	T1	T1	T1	T1	T0
1999	T1	T1	T1	T1	T1	T1	T1	T0
2000	T1	T1	T1	T1	T1	T1	T1	T1
2001	T1	T1	T1	T1	T1	T2	T1	T1
2002	T1	T1	T1	T1	T1	T2	T2	T1
2003	T1	T1	T1	T2	T2	T2	T2	T1
2004	T2	T2	T2	T2	T2	T2	T2	T1
2005	T2	T2	T2	T2	T2	T2	T2	T1
2006	T2	T2	T2	T2	T3	T3	T3	T2
2007	T2	T2	T2	T3	T3	T3	T3	T2
2008	T4a	T4a	T3	T3	T3	T3	T3	T2
2009	T4a	T4a	T3	T3	T3	T3	T3	T2
2010	T4a	T4a	T3	T3	T3	T3	T3	T2
2011	T4a	T4a	T3	T3	T4a	T4a	T4a	T4a
2012	T4a	T4a	T4a	T4a	T4a	T4a	T4a	T4a
2013	T4b	T4b	T4a	T4a	T4a	T4a	T4a	T4a
2014	T4b	T4b	T4a	T4a	T4b	T4b	T4b	T4a
2015	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b
2016	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b
2017	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b
2018	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b
2019	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b
2020	T4b	T4b	T4b	T4b	T4b	T4b	T4b	T4b

Nonroad: Construction equipment and vehicles that fall under the EPA non-road engine equipment category, which includes all diesel equipment not intended for highway use. For the purpose of this policy, these vehicles/equipment include only diesel construction vehicles/equipment with engines larger than 25 horsepower, which includes tractors, excavators, dozers, scrapers and other construction vehicles/equipment.